

## ***FIXED WING MARITIME MISSION SYSTEMS ASW LABORATORY***



The Maritime Mission Systems ASW Laboratory at the Naval Aviation Systems Team in Patuxent River, MD, offers a broad spectrum of capability to all major ASW programs. The facility provides timely access to technical data, and allows recommendations necessary to develop cost-effective, risk reduction strategies associated with multi-platform, multi-sensor air ASW issues.

# LAB COMPONENTS PROVIDE BROAD ASW SPECTRUM

The Maritime Mission Systems ASW Laboratory provides support for a broad range of ASW sensor and signal processor test and evaluation needs.

The ASW laboratory includes three ASG-2000 acoustic signal generators, each potentially capable of simultaneously generating up to 40 simulated sonobuoy signals in a coherent scenario. Multiple target capabilities are also supported. A modular scenario generation system hosted on a Sun workstation provides simulation and scenario control for the ASG-2000. In addition to standard US and NATO sonobuoy types, Improved Extended Echo Ranging (IEER) bistatic system simulation capability is under development.

The Multi Channel Transmitter Systems (MCTS) provide the capability to transmit the signals from simulated sonobuoy fields, or from scenarios previously recorded in-situ during flight tests or fleet operations.

The MCTS output can be directly coupled to the ASW receiver of an aircraft under test during ground operation, affording maximum OPSEC protection. Alternatively, the MCTS RF



can be coupled to an antenna for broadcast operation to support flight test. Several portable single channel sonobuoy signal generators are available, including the Programmable Acoustic Processor Stimulator (PAPS) and SCAS (Single Channel Acoustic Stimulator). PAPS systems can be configured and assembled rapidly to generate calibration grade sonobuoy signals for several standard sonobuoy types in the US and NATO inventories. Variants of standard sonobuoys and advanced sonobuoy designs can be accommodated through a modular development process.

Recording and playback equipment includes five Racal Storehouse and one Honeywell 101 MIL-STD-1610 28 track recorders. A 16 channel digital audio recorder and several dual channel Digital Audio Tape

recorders are also available. Libraries of classic test scenarios are maintained in the laboratory and at other ASW related facilities within the Patuxent River Complex.

RF analysis and test equipment required for calibrating and evaluating performance of ASW receivers are available. RF signal generators and other equipment for testing the efficacy of sonobuoy RF Counter-countermeasures (CCM) are in the ASW Laboratory's current inventory. A comprehensive suite of general purpose test equipment and bench facilities support custom test hardware development, instrumentation assembly, and troubleshooting.

The laboratory maintains a Mobile Acoustic Test van used to support remote ASW tests. The MATVAN has been used in support of ASW test evolutions and fleet exercises at locations on both coasts of the US, extending the reach of laboratory capabilities to virtually any desired location in North America. The current MATVAN equipment suite includes an MCTS, two 28 track recorder/reproducers, voice and data radio communication equipment, and computers for data analysis. Power can be obtained from a self contained generator.

Software packages for ocean acoustic propagation prediction, mission planning and replay, test data analysis and modeling are hosted on a variety of standard computing platforms.

*For more information, contact the Fixed Wing Maritime Mission Systems Laboratory at 301-342-3131.*

